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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,007	12/02/2008	Mario Contorni	PP022095.0003	6488

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EXAMINER	
LI, BAO Q	

ART UNIT	PAPER NUMBER
1648	

MAIL DATE	DELIVERY MODE
01/03/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,007	CONTORNI, MARIO	
	Examiner	Art Unit	
	BAO LI	1648	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,11-13 and 16-21* is/are pending in the application.

4a) Of the above claim(s) *16 and 21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7, 11-13, 17-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Summary

1. Applicant's response and amendment filed on Sept. 29. 2010 have been acknowledged. In summary, the status of claims are:

2. Claims 1-7 have been amended.

3. New claims 17-21 have been added.

4. Claims 8-10, 14-15 have been canceled.

5. Claims 1-7, 11-13, 16-21 are pending.

6. Claims 1-7, 11-13 and 17-20 within the scope of CRM197 carrier are considered.

Declaration under 37 CFR 1.132

7. The Declaration under 37 CFR 1.132 filed Sept. 29, 2010 has been acknowledged.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1, 4, 8, 9, 10, 12 are still provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 12-17 of copending Application No. 11,886,556 until the terminal disclaimer is filed as inferred by Applicants in the response.

Claim Rejections - 35 USC § 102

10. (Previous Rejection –Withdrawn) The rejection of Claims 1, 4, 8-13 under 35 U.S.C. 102(e) as being anticipated by US Patent No. 7,348,006B2 to Mario Contormi (A) has been removed in view of the under 37 CFR 1.132 filed Sept. 29, 2010.

11. (Previous Rejection – Withdrawn) The rejection of Claims 1, 4, 8-13 under 35 U.S.C. 102(e) as being anticipated by US Patent Applicants No. 2005/0158334A1) to Mario Conterini (B) has been removed in view of the under 37 CFR 1.132 filed Sept. 29, 2010.

12. (Previous Rejection – Withdrawn) The rejection of Claims 1, 4-5, 8-13 under 35 U.S.C. 102(b) as being anticipated by Nolan et al. (Vaccine, 2001, Vol. 19, pp. 2127-2137) has been withdrawn necessitated by Applicants' amendment as the vaccine taught by Nolan et al. comprises aluminum hydroxide.

13. (Previous Rejection – Withdrawn) The rejection of Claims 1, 4-5, 8, 11 under 35 U.S.C. 102(b) as being anticipated by Nicol et al. (The Pediatric Infectious Disease Journal, 2002, Vol. 21, No. 2, pp. 138-141) has been withdrawn necessitated by Applicants' amendment as the vaccine taught by Nicol et al. comprises aluminum hydroxide. The examiner apologized the typographic error inadvertently occurred in the previous office action.

14. (Previous Rejection – Withdrawn) Claims 1, 4, 8, 11-13 under 35 U.S.C. 102(b) as being anticipated by Eskota et al. (A) (LACENT, 1996, Vol. 348, pp. 1688-1692) has been withdrawn necessitated by Applicants' amendment as the vaccine taught by Eskota et al. comprises aluminum hydroxide.

15. (Previous Rejection – Withdrawn) Claims 1-2, 4, 7, 11-13 under 35 U.S.C. 102(b) as being anticipated by Amir et al. (Vaccine 1997, Vol. 2, pp. 149-154) has been withdrawn

necessitated by Applicants' amendment as the vaccine taught by Amir et al. comprises aluminum hydroxide. .

16. (Previous Rejection – moot) The rejection of Claims 1-2, 4, 7-13 under 35 U.S.C. 102(b) as being anticipated by Boutriau et al. (US Patent Publication No. 2003/0180316A1) has been moot necessitated Applicants' amendment.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. (Previous Rejection-Withdrawn) The rejection of claims 1-7 and 11-12 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Eskola et al. (THE LACENT 1999, Vol. 354, pp. 2063-2068) and Black et al. (Pedistr. Infet. Dis. 1992, Vol. 12, No. 12, pp. 981-985) in light of the disclosure by US CDC documentation published on line (See attachment) has been withdrawn necessitated by Applicants' amendment.

19. (Previous Rejection-Withdrawn) The rejection of Claims 1-13 under 35 U.S.C. 103(a) as being unpatentable over Nolan et al. (Vaccine, 2001, Vol. 19, pp. 2127-2137) or and Robinson (Drugs of Today. 1993, Vol. 29, No. 7, pp. 463-464) or Eskola et al. (THE LACENT 1999, Vol. 354, pp. 2063-2068) and Black et al. (Pedistr. Infet. Dis. 1992, Vol. 12, No. 12, pp. 981-985)) has been withdrawn necessitated by Applicants' amendment.

20. (New Ground Of Rejection) Claims 1-7, 11-13 and 17-20 are rejected under 35 U.S.C. 103(a) as obvious over Boutriau et al. (US Patent Publication No. 2003/0180316A1) Kanra et al. (Pediatrics International June 2003, Vol. 45, No. 3, pp. 314-318) and Tauxe R (EMERFING INFECTIOUS DISEASE, 2001, Vol. 7, No. 3, pp. 516-521).

21. In the response, Applicants assert that the rejection by Boutriau et al. does not include claim 8, therefore, the amendment of claims by adding the limitation of claim 8 will be free of rejection. The rejection therefore, should be withdrawn.

22. Applicants' argument is not persuasive because it is not factual. First of all, the rejection by Boutriau et al. does include claim 8 and Boutriau et al. do teach that multivalent vaccine conjugated with aluminum phosphate [0067]. To this context, the cited reference still anticipates the rejected claims. Boutriau et al. do not explicitly teach the container labeling or sealing process.

23. Kanra et at al. teach that DTaP plus Hib-CRM197 conjugated with aluminum phosphate (ALPO4) can be used for replacing the same vaccine but Hib is conjugated with aluminum hydroxide. It does not impact the safety profile, which it does increase the magnitude of the antibody product as well as prolong the immune response (Abstract).

24. Tauxe R describe that all Hermetically sealed container such as a vial is a regular practice according to the CDC regulation.

25. Regarding the percentage of the conjugated Hib and ration of the saccharide vs. protein, the modification of the ration of protein or concentration of antigen conjugated or not conjugated is generally recognized as being within the level of the ordinary skill in the art, In re Rose, 105 USPQ 237 (CCPA 1995) because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the workable ranges involves only routine skill in the art, In re Aller, 105, USPQ 233.

26. Therefore, it would have been obvious for a person ordinarily skilled in the art to be motivated for using aluminum phosphate to conjugate the Hib in preparation of an immunogenic composition in replacing aluminum hydroxide for getting more significant immune response as taught by Kanra et al. Hence, the claimed invention as a whole is prima facie obvious absence unexpected results.

27. (New Ground Of Rejection) Claims 1-7, 11-13 and 17-20 are rejected under 35 U.S.C. 103(a) as obvious over Asensi et al. (Acta Paediatri May 2003, Vol. 92, pp. 541-545) and Tauxe R (EMERFING INFECTIOUS DISEASE, 2001, Vol. 7, No. 3, pp. 516-521).

28. Asensi et al. teach a method for using a combined liquid vaccine DTwPHib (Chiron Vaxem 4), containing 0.5 ml per dose of diphtheria toxoid, inactivated pertussis organism, tetanus toxoid and CRM-197-Hib conjugate, wherein the CRM-197 adsorbed onto aluminum phosphate. In a comparative study, the combined liquid vaccine composition, a more significant immune responses for each individual antigen are increased more then using aluminum

hydroxide conjugate. The safety profile is also not influenced by using aluminum phosphate. They concluded that the combined liquid vaccine DTwPHib is a safe and effective immunogenic vaccine. Asenis et al. do not teach that the combination liquid vaccine is packaged and labeled before use.

29. Tauxe R. describe that all packaging and hermetically sealed container etc such as a vial is a regular practice according to the CDC regulation. Moreover, none of vaccine is not packaged and labeled before use in the art inherently.

30. Regarding the percentage of the conjugated Hib and ration of the saccharide vs. protein, the modification of the ration of protein or concentration of antigen conjugated or not conjugated is generally recognized as being within the level of the ordinary skill in the art, In re Rose, 105 USPQ 237 (CCPA 1995) because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the workable ranges involves only routine skill in the art, In re Aller, 105, USPQ 233.

31. Therefore, it would have been obvious for a person ordinarily skilled in the art to be motivated for using aluminum phosphate to conjugate the Hib in preparation of an immunogenic composition in replacing aluminum hydroxide for getting more significant immune response as taught by Asensi. Hence, the claimed invention as a whole is prima facie obvious absence unexpected results.

32. (New Ground Of Rejection) Claims 1-7, 11-13 and 17-20 are rejected under 35 U.S.C. 103(a) as obvious over Gupta et al. (Biologicals 1999, Vol. 27, pp. 167-176) and Tauxe R (EMERFING INFECTIOUS DISEASE, 2001, Vol. 7, No. 3, pp. 516-521).

33. Gupta et al. describe a method using an immunogenic composition to induce an immune response against D, T P and Hib, wherein one of the compositions used is the one comprising diphtheria, tetanus and accelular pertusis (DTaP) vaccine in combination with influenza type b (Hib) capsular polysaccharide conjugated with DTaP, wherein the Hib is the Aluminum phosphate ($AIPO_4$) for adsorbed or DTaP is aluminum phosphate conjugated too. Aluminium phosphate ($AIPO_4$) adsorbed HibT vaccine or HibT as a combination with $AIPO_4$adsorbed DTaP vaccine showed significant increases in IgG antibodies to tetanus toxin in mice as well increased tetanus antitoxin levels in guinea pigs as compared to soluble HibT vaccine. In general, combining DTaP and HibT vaccines did not affect the antibody levels to tetanus and diphtheria

toxoids whereas DTaP–HibT combination vaccine elicited significantly lower IgG antibodies to pertussis toxin and filamentous haemagglutinin than DTaP vaccine alone, particularly after first injection. Gupta et al. do not teach particualr ration and concentration of the antigen. But the reference teaches that the Hib polysaccharide and antigen protein ration is from 1:1 to 3:1 that meet the limitation cited in claims 20.

34. Regarding the percentage of the conjugated Hib and ration of the saccharide vs. protein, The modification of the ration of protein or concentration of antigen conjugated or not conjugated is generally recognized as being within the level of the ordinary skill in the art, In re Rose, 105 USPQ 237 (CCPA 1995) because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the workable ranges involves only routine skill in the art, In re Aller, 105, USPQ 233.

35. Gupta et al. do not teach that the combination liquid vaccine is packaged and labeled before use.

36. Tauxe R. describe that all packaging and hermetically sealed container etc such as a vial is a regular practice according to the CDC regulation. Moreover, none of vaccine is not packaged and labeled before use in the art inherently.

37. Therefore, it would have been obvious for a person ordinarily skilled in the art to be motivated for using aluminum phosphate to conjugate the Hib in preparation of an immunogenic composition in replacing aluminum hydroxide for getting more significant immune response as taught by Gupta et al. Hence, the claimed invention as a whole is prima facie obvious absence unexpected results.

38. (New Ground Of Rejection) Claims 1-7, 11-13 and 17-20 are rejected under 35 U.S.C. 103(a) as obvious over Peetermans et al. (US patent No. 6,756,040B2) and Tauxe R (EMERFING INFECTIOUS DISEASE, 2001, Vol. 7, No. 3, pp. 516-521).

39. Peetermans et al. teach a vaccine formulation to prevent the Haemophilus Influenza B (Hib) infection. The vaccine formulation is related to a multivalent vaccines comprises DTaP and Hib, wherein the Haemophilus influenza type B capsular polysaccharide (PRP) is first conjugated to a carrier protein selected from tetanus toxoid (TT), diphitheria toxoid, Diphtheria CRML197 protein and Meningococcla outer membrane protein and then formed as mixture of DTaP-Hib. During the preparation, the Hib (PRP) carrier protein, such as Hib-TT conjugate is

preadsorbed onto aluminum phosphate and then combined with DTaP or DTaP-HB or Hib is preabsorbed onto aluminum. The PPRP and to carrier protein ratio is from 1:0.3 to 1:2. (See entail document). Peetermans et al. do not describe the particular ratio of adsorption and, it only teaches that the concentration of Hib is about 0.5 μg -12.5 μg. The PRP-T aluminum phosphate pre-adsorption conjugate is in a lower ratio, wherein the anti-Hib antibody induced is more than 10 μg/ml (See Table 1).

40. Peetermans et al. do not teach that the combination liquid vaccine is packaged and labeled before use.

41. However, it is routine and common knowledge of vaccine packaging and labeling as evidenced by Tauxe R. describe that all packaging and hermetically sealed container etc such as a vial is a regular practice according to the CDC regulation, since none of vaccine is used according to the regulation of the CDC.

42. Moreover, regarding the percentage of the conjugated Hib and ration of the saccharide vs. protein, the modification of the ration of protein or concentration of antigen conjugated or not conjugated is generally recognized as being within the level of the ordinary skill in the art, In re Rose, 105 USPQ 237 (CCPA 1995) because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the workable ranges involves only routine skill in the art, In re Aller, 105, USPQ 233.

43. Therefore, it would have been obvious for a person ordinarily skilled in the art to be motivated for using aluminum phosphate to conjugate the Hib in preparation of an immunogenic composition in replacing aluminum hydroxide for getting more significant immune response as taught by Peeterman a et al. Hence, the claimed invention as a whole is prima facie obvious absence unexpected results.

44.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BAO LI whose telephone number is (571)272-0904. The examiner can normally be reached on 6:30 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zachariah Lucas can be reached on 571-272-0905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bao Qun Li/
Primary Examiner, Art Unit 1648
45.